REMARKS

The following remarks are submitted to address the rejections in the office action mailed February 24, 2003. The foregoing amendments do not contain new matter. Accordingly, entry and consideration of the amendment is respectfully requested.

Claim 1 stands objected to based on informalities. Claims 1-30 are pending in the application, claims 18-30 having been added by this Amendment. Claims 1-13 stand rejected under 35 U.S.C. §§ 103(a) and 112, first paragraph. Claims 1-13 also stand rejected under 35. U.S.C. § 103. In addition, the Title stands objected to. The examiner has indicated allowance of claims 14-17. The following remarks address the foregoing amendments and each of the aforementioned objections and rejections.

Amendments to the Title

Applicant seeks to amend the title of the invention to clearly indicate the invention to which the claims are directed.

Amendments to Claims 1 and 14

Applicant seeks to amend claims 1 and 14 to more clearly recite the claimed subject matter of the present invention. Claim 1 is sought to be amended to clarify that the process of claim 1 is a process for separating metal values to be recovered from one or more additional metal values contained in the original metal containing material. Additionally, claim 1 is amended as suggested by the examiner to render moot the objection based on informalities.

The amendments to claim 14 have been added to clarify terminology and better define the scope of the claim. Applicant does not believe these amendments affect the allowability of claims 14-17, as indicated by the examiner.

The clarifying amendment of claims 1 and 14 are supported throughout Applicant's specification, *e.g.* at page 2, lines 16-28; at page 3, lines 13-28; and in the Examples.

Claim 1 – Objection Based on Informalities

Applicant has amended claim 1 as suggested by the examiner in order to render this objection moot. In view of the foregoing, applicant respectfully requests that the examiner withdraw this rejection.

Claims 1-13 – 35 U.S.C. § 112, first paragraph

The rejection of claims 1-13 under 35 U.S.C. § 112, first paragraph is respectfully traversed and rendered moot upon entry of the amendments to claim 1 set forth above and the comments below.

Contrary to the Examiner's position, "to render a metal value insoluble" and "being recovered and render the one or more additional metal values insoluble," added in the amendment filed February 26, 1998, do not constitute new matter. Page 3, line 29 through page 4, line 2 of Applicant's specification describe the separation of uranium metal values from tantalum and/or niobium metal values in a metal containing material. As described in this section, the process of the present invention results in the tantalum and/or niobium metal values being solubilized and the uranium metal values being reduced to an insoluble state. The Examples provided in Applicant's specification further illustrate this process.

On page 3 lines 17-18 and 26-27, the specification describes the process of the present invention including dissolving metal values to be recovered in a "sulfuric acid solution in the presence of a small amount of a reducing agent and a carbon source for a period of time sufficient to solubilize the metal values ... without also dissolving significant amounts of uranium." One skilled in the art will appreciate from this disclosure that the digestion mixture including the reducing agent renders the uranium insoluble. Thus, the phrase "to render a metal value insoluble" is enabled by the specification.

Furthermore, on page 5 lines 4-7 the specification states "[i]f desired the separated solids may be further processed to recover uranium and/or ***other metal values***." (emphasis added) Thus, the original specification indicates the existence of metal values in the precipitate other than uranium. It is to the uranium or "other metal values" that the phrase "one or more additional metal values insoluble in the digestion mixture" is

referring. As such, this previously entered claim amendment does have support in the original specification, and therefore, is not new matter.

Additionally, the examiner rejects claims 1-13 under 35 U.S.C. § 112, first paragraph, stating that the specification, while being enabling for tantalum, niobium and uranium metal values, does not reasonably provide enablement for any metal and one or more additional metal values. Applicant respectfully requests the examiner reconsider this rejection based on the comments below.

The generic process claimed in Claim 1 of the present invention is just that, a generic process useful to separate and recover metal values from a digestion mixture. The metals disclosed in the specification illustrate one embodiment of the method of the present invention and by no means encompass the range of acceptable materials. On page 5 lines 4-7 the specification states "[i]f desired the separated solids may be further processed to recover uranium and/or ***other metal values***." (emphasis added) On page 3, lines 8-10 the specification discloses, "the present invention provides a process for recovering metal values, particularly tantalum and niobium." Thus, while tantalum and niobium are the preferred metal values, the process can be used to recover other metal values. Applicant respectfully asserts that this is sufficient disclosure to enable values other than tantalum, niobium and uranium.

Section 2164.01(b) of the MPEP states:

> "[a]s long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of 35 U.S.C. 112 is satisfied. *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). Failure to disclose other methods by which the claimed invention may be made does not render a claim invalid under 35 U.S.C. 112. *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533, 3 USPQ2d 1737, 1743 (Fed. Cir.), *cert. denied*, 484 U.S. 954 (1987).

Additionally, the Court of Custom and Patent Appeals (CCPA) has acknowledged the difficulty of claiming chemical processes wherein there is a degree of unpredictability in the chemical reactions therein,

> "To require such a complete disclosure would apparently necessitate a patent application or applications with "thousands" of examples or the disclosure of "thousands" of catalysts ... More importantly, such a requirement would force an inventor seeking adequate

> patent protection to carry our a prohibitive number of actual experiments. This would tend to discourage inventors from filing patent applications in an unpredictable area since the patent claims would have to be limited to those embodiments which are expressly disclosed. A potential infringer could readily avoid "literal" infringement of such claims be merely finding another analogous catalyst complex which could be used in "forming hydroperoxides." *In re Angstadt,* 190 USPQ at 218.

Thus, it is not necessary to disclose every embodiment in the specification. Enablement rests on whether one skilled in the art could make and use the claimed invention from the disclosure coupled with information known in the art without undue experimentation. *United States v. Telectronics, Inc.,* 857 F.2d 778, 8 USPQ2d 1217 (Fed. Cir. 1988*); In re Stephens,* 188 USPQ 659 (CCPA 1976). An application is enabling of an invention where "what has been taught by the parent specification to those "skilled in the art to which it pertains," 35 U.S.C. § 112, and as to them, a compound may well be disclosed without positive identification." *Petisi v. Rennhard,* 363 F. 2d 903, 150 USPQ 669 (C.C.P.A. 1966). Applicant asserts that the present specification adequately discloses the invention as claimed to "one skilled in the art." Furthermore, it would not require undue experimentation for the skilled practitioner to discern the range of acceptable initial conditions and materials to which the present invention is directed.

The examiner further rejects claims 1-13 stating the specification does not reasonably provide enablement for a digestion solution which does not comprise fluoride ion. The examiner points to pages 3-4 to illustrate the necessity of fluoride ions in order to insoluble uranium metal. However, the last paragraph on page 3 begins with "While not wishing to be bound by this theory, it is believed that the uranium ... is reduced to a lower state of oxidation by the iron. The presence of a small amount of free fluoride ion from the HF addition causes the uranium in the lower oxidation state to be precipitates, probably as UF_4." The specification on pages 3-4 describes a theory as to how the reduction of uranium takes place. The exact chemical process that takes place is not fully understood, however complete understanding is not required to enable the invention, as discussed above. Other compounds may be employed to effect the reduction of uranium in the present invention. The presence of fluorine in the specification serves to illustrate a theorized mechanism of the reduction of uranium in a sulfuric acid medium. One

skilled in the art could understand the scope of the present invention and the reduction of uranium without the fluoride ion without undue experimentation. Thus, applicants respectfully assert the present specification is enabling for the digestion solution regardless of whether or not the fluoride ion is present.

Applicants respectfully submit that all rejections under 35 U.S.C. § 112 have been overcome or rendered moot by the foregoing amendments. As such, the examiner is requested to reconsider and withdraw the rejections to claims 1-13.

Claims 1-13 – 35 U.S.C. § 103(a)

The rejection of claims 1-13 under 35 U.S.C. § 103(a) in view of Bender ('490) taken with Pazdej ('777) is respectfully traversed. Applicant believes that the amendments to claim 1 in view of the following comments renders this rejection moot. Applicant respectfully requests reconsideration of the foregoing rejection in light of the foregoing amendments and following remarks.

Claim 1 has been amended, above, to better define the present invention. Applicant asserts that these amendments further exemplify how Bender taken with Pazdej differs from the present invention, including the "digestion mixture" and delineation of the "metal values to be recovered" and the "additional metal values." Most importantly, claim 1 now states that the carbon source is one "which differs from the reducing agent." Neither Bender nor Pazdej, alone or in combination, suggest a separate carbon source and reducing agent, nor do they realize the benefits of such a combination.

The examiner points out that Bender teaches a reductant source "selected from the group consisting of sulfide materials, carbonaceous materials, and mixtures thereof." (Bender Col. 55, lines 9-12) However, the term "mixtures" thereof likely refers to a raw mineral, such as an ore, a mining waste, or a milling waste, that contains both sulfide materials and carbonaceous materials. Thus, the carbon and reductant source taught in Bender are the same. Similarly, Pazdej does not teach or suggest independent carbon and reductant sources, as required by the present invention. Therefore, Pazdej fails to account for this deficiency in Bender.

In that Bender taken with Pazdej fails to render claim 1 as amended obvious the examiner is respectfully requested to reconsider and withdraw the rejection to claims 1-13 under 35 U.S.C. § 103(a)

New Claims 18-30

New claims 18-30 have been added to provide claim coverage on additional features of the invention. Support for claims 18-30 may be found in the original claims 1-17 and throughout the Specification. Claim 18 specifies a starting material comprising tantalum and/or niobium metal values. As such, it is respectfully submitted that claims 18-30 should be allowable for the reasons the Examiner has found existing claims 14-17 allowable.

CONCLUSION

All of the rejections of the Examiner under 35 U.S.C. § 112 and 35 U.S.C. § 103 have been met and overcome upon entry of the foregoing amendment and in view of the foregoing remarks. Accordingly, Applicant respectfully requests that the rejections be withdrawn and the application be allowed. The Examiner is respectfully invited to contact the undersigned at 336.607.7315 to discuss any matter relating to the application.

Respectfully submitted

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